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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/550,192 | 04/17/2000 | Antony Shui Sum Tang | 8446.00 | 1551 |
| 7590 | 05/05/2004 | | | EXAMINER |
| Michael Chan NCR Corporation 101 West Schantz ECD 2 Dayton, OH 45479-0001 | | | | WASYLCHAK, STEVEN R |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3624 | |

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--|-------------------------|----|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/550,192 | TANG ET AL. | |
| | Examiner Steven R. Wasylchak | Art Unit 3624 | ML |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 17 April 2000.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

4) Claim(s) 1-13 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-13 is/are rejected.

7) Claim(s) 8-13 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

| | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to Applicant's remarks on Feb. 6, 2004.
2. Examiner stands corrected in his procedure for ascertaining clarification. Section 112 should have been used.
3. The term "software unit" does not appear to be standard usage language as stated in Point 3 as it could not be found in the Microsoft Press Computer Dictionary or The Dictionary of Computers, Information Processing and Telecommunications or How to Build a Program by Jack Emmerichs. That term, software unit, does not exist on page 33 as specifically stated by Applicant in Point 5. This question permeates Applicant's response and Examiner will proceed in light of this question.
4. Examiner very strongly suggests the use of set theory, including intersection and union, in his drawings to further clarify his claims.
5. On page 6, Applicant states that he is not required to argue the patentability of newly added claims in view of dependency. This is incorrect. See 37 CFR 1.111(b) which states that any newly added claims, whether they be independent or dependent (here dependent claims 8-13), are required to be shown to be patentable in view of the prior art of record (note last sentence of 1.111(b)).

Claim Objections

6. Claim 8-13 objected to because of the following informalities: c) and/or d) sub-headers. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 6 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "software unit" is not clear for reasons given in item 3 above; different labels for the exact same elements create indefiniteness.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-13 are rejected under 35 U.S.C.103(a) as being unpatentable over Yates et al (US 6,330,586) and official notice.

As per claim 1,

A method of constructing a plurality of software systems, comprising the following steps:

a) maintaining an inventory of software modules, which includes:

i) a group of type A modules; and / abstract(**“Each domain has an intelligent agent...” where type A is the intelligent agent for each domain**); col 2, L 57-65; col 4, L 3-12; col 5, L 40-55; col 18, L 1-13

ii) a collection of type B modules;/ abstract(**Each domain has an intelligent agent and this community of agents....“where the community of agents also include type B modules**; col 2, L 57-65; col 4, L 3-12; col 5, L 40-55; col 18, L 1-13

b) when constructing each software system,

i) Yates discloses including copies;/ col 18, L **14-36. However, Yates does not explicitly teach** copies of the entire group of type A modules. Official notice is taken that copies of the entire group of type A modules is old and well known in the computer art. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement this feature of copies of the entire group of type A modules for the advantage of having a backup system in case of system failure.

ii) Yates discloses including copies;/ col 18, L **14-36. However, Yates does not explicitly teach** copies of the entire group of type B modules. Official notice is taken that copies of the entire group of type B modules is old and well known in the computer art. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement this feature of copies of the entire group of type B modules for the advantage of having a backup system in case of system failure.

iii) Yates discloses generating at least one customized module./ abstract; col 2, L 57-65; col 3, L **1-8**(...allow extra behaviors....is customization); col 4, L 3-12; col 5, L 40-55;

col 18, L 1-13. **However, Yates does not explicitly teach** copies of **neither a (Exr. assuming a pure)type A nor a (Exr. assuming a pure)type B module.** Official notice is taken that copies of **neither a type A nor a type B module** modules is old and well known in the computer art. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement this feature of **neither a pure type A nor a pure type B module** for the advantage of having a flexibility in the design of system modules.

As per claim 2,

Method according to claim 1, wherein each system constructed performs the following functions:

- 1) processing of the content of messages;/ col 1, L 1-5; col 2, L 57-65; col 4, L 3-12; col 16, L 11-23; **col. 5, L 33-55: "...add, subtract or replacing...." Is to process**
- 2) packaging of messages into packets for transport out of the system;/ col 14, L 37-51; col 18, L 9-13
- 3) transfer of messages into, and out of, the system; **and/abstract**, col 5, L 33-55; **col. 17, L 27-37**
- 4) coordination of functions (1), (2), and (3)./ col 4, L 3-12; **col 17, L 16-21; col 18, L 1-9, 14-36**

As per claim 3,

Method according to claim 2, wherein functions (3) and (4) are performed using type A modules exclusively./ **abstract**; **col 17, L 16-21; col 18, L 1-13; L 56-63**

As per claim 4,

Method according to claim 3, wherein function (1) is performed using a combination of type A, type B, and customized modules./ col 4, L 26-35; col 18, L 1-13

As per claim 5,

Method according to claim 4, wherein function (2) is performed using a combination of type A, type B, and customized modules./ col 4, L 26-35; col 18, L 1-13

As per claim 6,

An expedited method of assembling a software system, comprising the following steps:

a) fabricating a collection of software systems, each of which contains/ abstract; col 2, L 38-65; col 4, L 13-65

i) a processing module (PROC MOD) which processes content of messages;/ col 2, L 57-65; col 4, L 3-12; col 16, L 11-23

ii) a packaging module (PAK-MOD) which packages messages into packets for transport out of the system;/ col 14, L 37-51; col 18, L 9-13

iii) a communication module (COM MOD) which accepts and delivers message packets; and/ col 5, L 40-55; col 14, L 37-51; col 18, L 9-13

iv) a system control module (CONTROL) which coordinates the processes of (i), (ii), and (iii);/ col 4, L 3-12

b) during the fabrication of paragraph (a),

i) fabricating identical CONTROL modules in all systems;/ col 4, L 26-35; col 18, L 1-13

ii) fabricating identical COM MOD modules in all systems;/ col 4, L 26-35; col 18, L 1-13

iii) fabricating PAK-MOD modules in all systems, such that:

- A) copies of a software unit A is contained in every PAK-MOD module;/ col 4, L 26-35; col 18, L 1-13
- B) some PAK-MOD modules contain a software unit B with no unit C; and/ col 4, L 26-35; col 18, L 1-13
- C) some PAK-MOD modules contain a software unit C with no unit B./ col 4, L 26-35; col 18, L 1-13

As per claim 7,

Method according to claim 6, and further comprising the following step:

- iv) fabricating PROC MOD modules in all systems, such that:
 - A) copies of a software unit D is contained in every PROC MOD module;/ col 4, L 26-35; col 18, L 1-13
 - B) some PROC MOD modules contain a software unit E with no unit F; and/ col 4, L 26-35; col 18, L 1-13
 - C) some PROC MOD modules contain a software unit F with no unit E.2. / col 4, L 26-35; col 18, L 1-13

As per claim 8 ,

(New) Method according to claim 1, and further comprising the step of

- c) installing the software systems into electronic payment switches.

As per claim 9,

(New) Method according to claim 2, and further comprising the step of
c) installing the software systems into electronic payment switches./fig
2(all with 6:pay charges); col 2, L 1-9, 52 to col 3, L 15; col 4, L 13-61;
col 16, L 11-23

As per claim 10,

(New) Method according to claim 6, and further comprising the step of
c) installing the software system into an electronic payment switch./ col
2, L 1-9, 52 to col 3, L 15; col 4, L 13-61; col 16, L 11-23

As per claim 11,

(New) Method according to claim 7, and further comprising the
step of
c) installing the software system into an electronic
payment switch./ col 2, L 1-9, 52 to col 3, L 15; col 4, L 13-61; col
16, L 11-23

As per claim 12,

(New) Method according to claim 1, and further comprising:
c) repeating steps of paragraph (b) to thereby modify a software system

previously constructed; and/ abstract (reusable, reconfigurability)

d) installing the modified software system into an electronic payment switch./ col 2, L 1-9, 52 to col 3, L 15; col 4, L

13-61; col 16, L 11-23

As per claim 13,

(New) Method according to claim 6, and further comprising:

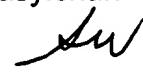
c) repeating steps of paragraphs (a) and (b) to thereby modify a software system previously fabricated; and/refer to claim 12

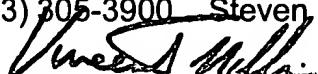
This action is NON-FINAL. Any inquiry concerning this communication or earlier communications from the d) installing the modified software system into an electronic payment switch./refer to claim 1

examiner should be directed to Steven R. Wasylchak whose telephone number is (703) 308-2848. The examiner can normally be reached on Monday-Thursday from 7:00 a.m. to 6:00 p.m. EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin, can be reached at (703) 308-1065. The fax number for Art Unit 3624 is (703) 746-7239Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the

receptionist whose telephone number is (703) 305-3900 Steven

Wasylchak 4/29/04





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